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DUST.

About fourteen years ago, Professor Tyndall, when conducting some curious and interesting experiments into the purity of the atmosphere of various localities, had occasion to make use of a simple method of determining whether certain samples of air contained dust or not. By 'dust,' it should be explained, is meant any foreign floating particles, no matter what their nature may be. Having confined his air in a transparent glass, he placed it on a dark background in a darkened room, and allowed a ray of very powerful light to pass through it. When the air was free from dust, the ray within the vessel was invisible, the pure air remaining unilluminated; when, on the other hand, the air contained dust, the floating particles reflected more or less of the light, and the ray became visible as an illuminated band. He discovered that the ordinary atmosphere—such, that is, as is found close to the surface of the earth, and especially near cities and in dwelling-houses—invariably contains foreign bodies; that, in other words, it reflects light.

It was while carrying out these experiments that Professor Tyndall noticed a very remarkable phenomenon. If a heated body, such as a hot wire, be suspended in a glass that contains dusty air, and a ray of light be then passed through the vessel, the observer will remark that a dark, unilluminated *aura* at once rises about and above the wire; or, to speak otherwise, that, in the midst of the luminous dusty air, there is a transparent, unilluminated space, the core of which is the wire. In fact, streaming upwards, there is a body of air which is free from dust. The mounting of the air from the hot wire is explicable enough. The particles in immediate proximity to the wire become warmer, and, in consequence, lighter than the other particles; and therefore a current starts upwards from the hot surface. The then unsolved problem was: Why did this current contain no dust? The most natural conclusion seemed to be that the heated wire destroyed the dust that came into contact with it; and it may be that in certain cases this conclusion is a just one, for there are some kinds of dust—using the word in its widest sense—which heat may be said to annihilate. Floating particles of water and of fugitive salts, &c., come under this category; and Professor Tyndall appears to have temporarily accepted this explanation as applying to all kinds of dust. But it was in time demonstrated that this theory was incorrect. Three or four years ago, the provisional conclusions were upset by some further experiments of Lord Rayleigh, who for the hot wire substituted a wire of very low temperature, and observed that a downward current was then produced, and that this current, like the other one, was free from dust. The cold wire of course cooled the particles of air that came into immediate contact with it, and rendering them heavier than their neighbours, induced them to travel downwards. But why was the column dustless? It seemed incredible that the dust could have been destroyed by cold, as it had been supposed to be destroyed by heat. Some other explanation was obviously required; and the difficulty led scientific men to observe with greater attention than before the behaviour of dust in the neighbourhood of fixed bodies.

Experiments were made with vessels containing air which had been artificially loaded with floating particles. The burning of a piece of magnesium wire liberates a dense white cloud, consisting of minute atoms of magnesia. Charge a glass receiver with these fumes; suspend within the vessel a fragment of charcoal; and arrange matters in such a way that a strong ray of warm sunlight may be turned on to the charcoal and off again at will. If the observer suddenly turns on the ray, he will see that the fumes are dense throughout the vessel, and that these closely surround the charcoal, which, in fact, so long as it remains in the dark and at the same temperature as the surrounding air, has no influence upon the dust. But, in a few seconds, the sunlight will begin to warm the charcoal, and then the upward current of dustless air will become noticeable. First, a thin layer of

dustless air will be seen to form around the charcoal. It will be thickest on the side that is immediately exposed to the warmth; and it will rise gradually, until it constitutes the unilluminated *aura*, which was remarked by Professor Tyndall. As the observer watches, it will seem to him as if the charcoal drove away the dust from the approaching air. This cleansing process begins with the warming of the charcoal; and it is therefore tolerably clear that the warming of the charcoal is the cause of the phenomenon. This supposition is supported by the fact, that if the charcoal be warmed before its introduction into the vessel, and the ray be then turned on, it will be seen that the dustless, unilluminated *aura* has been already formed. It will also be remarked that the hotter the charcoal, the larger will be the *aura*. Indeed, in favourable circumstances, an *aura* with a minimum thickness of one-twenty-fifth of an inch may be produced. Hot iron, glass, paper, or stone may be substituted for charcoal. Any of these, or even a heated surface of oil or water, will give the same results. From the warm body, a column of dustless air will be seen to rise. If a glass tube be passed through the body of the receiver, the phenomenon can be examined under the most favourable conditions; for the tube can then be charged with water of varying temperature; and it will be noticed that any increase of heat is immediately followed by an increase in the dimensions of the *aura*, and of the upward current of dustless air. If the tube be charged with ice, a downward current will set in, and, although no *aura* will be visible, and the tube itself will become dusty, the downward current will still be found to be free from dust.

The phenomena, strange as they are, are both explicable by reference to the mechanical laws of heat. According to the received theory, heat is the motion of the molecules of which all bodies ultimately consist. The molecules of air are always in lively motion; and the warmer the air, the more lively is that motion. If in a portion of air there be placed a body of a higher temperature, that body imparts a portion of its heat to the surrounding molecules of air, and, in consequence, increases the liveliness of their motion. In the immediate neighbourhood of the warmer body, therefore, the air molecules have two different motions. Those of them which have not touched the warmer body move with comparative slowness; whereas, those of them which have touched it move with accelerated speed away from it. And so, a particle of dust that chances to float somewhere near to the warm body is gently impelled towards it by the unaffected molecules, but more forcibly driven away from it by the molecules which have acquired new heat. The warmed molecules win the day; and, naturally, the particle of dust being unable to overcome them, does not approach the warm body. Such is the position of things so long as the body remains warmer than the air in which it has been placed; and such is the explanation of the dustless *aura* that surrounds warm bodies. The lighter a gas is, the more vigorous is the motion of its molecules. In hydrogen, therefore, a larger dustless *aura* may be produced than in atmospheric air; and, similarly, under the half-exhausted receiver of an air-pump, a larger *aura* may be produced than is possible under normal conditions. When a body of a temperature lower than that of the surrounding air is introduced into the receiver, the strife between the two classes of air-molecules has a different result. The molecules which have touched the cold body have their temperature lowered, or, in other words, their activity lessened. They are driven back by the superior vigour of the others; and the particles of dust that are floating in the air are, in consequence, carried close to the cold body and forced against it. They remain on its surface, and the air in which they floated is cooled, and falls, by virtue of its weight. Such is the explanation of the downward dustless current. To sum up: bodies which are warmer than their surroundings, visibly drive off dust; and those which are colder, visibly attract it. These are the special principles, which, modified, of course, by the operation of the various natural forces, regulate the deposit of floating particles from the atmosphere.

But there is yet another kind of body which has a remarkable influence upon dust, and, through dust, upon moisture in the air. The introduction into a dusty atmosphere of a body highly charged with electricity produces a new phenomenon. In order to observe it, let an electrical machine in action be so arranged that its conductor shall be charged with positive electricity, while the negative current goes to the earth; and then let the room be filled with dust. The influence of the conductor will make itself felt over a large cubic space in the following manner. In normal circumstances, every particle of dust contains equal portions of positive and negative electricity. The positive conductor, however, attracts negative electricity and repels positive. The particles, therefore, become positive on one side and negative upon the other. If two particles of dust, while in this condition, approach one another, the negative electricity of the one will attract the positive electricity of the other; and the two particles will, in consequence, cleave together, and form a larger particle, which, in turn, at once becomes positive on one side and negative on the other. There are thus continual additions of particles; and when the aggregations of dust become large, they sink by their own weight to the ground. The presence, therefore, of highly electrified bodies hastens the deposit of dust.

It has been proposed to utilise this law in order to free London from the soot and fog which, especially at certain seasons, enshroud her. It seems to be established that a London fog owes its existence to the immense quantity of dust which is created by the myriad chimneys and the ten thousand manufactories of the metropolis; and the way in which the yellow fog is supposed to form is curious. When a particle of dust is afloat in a damp atmosphere, some of the moisture condenses on it, and it becomes the nucleus of an 'atom' of fog. The weight of the particle is thus increased; and the water-logged dust floats low. The result is that the humidity is denser than it would be if it were unladen with so much dust, and that it is darker and more opaque in proportion to the amount of dust that it contains. If we had less dust and soot, we should have less of this pall-like fog; and if we could precipitate some of our dust, we should diminish our

risk of being enveloped in Egyptian darkness at mid-day. The experiments of Lodge and Clark may be said to have proved this. These gentlemen filled a glass jar with the smoke of magnesium, and at once successfully cleared the atmosphere of the vessel by means of electricity. They also filled a room with the soot of burnt turpentine, and cleared it in a few minutes by setting an electrical machine at work. They then bethought themselves that it might be possible to carry out a similar process on a gigantic scale, and to free London from dust and soot by means of electricity. The plan is at present impracticable, but it is scientifically sound, and some modification of it may in years to come be carried out. It at least deserves mention, as showing that the careful observation of some of the most apparently insignificant of natural processes may reveal facts of the highest importance to the health and comfort of humanity.

A HOUSE DIVIDED AGAINST ITSELF.

CHAPTER XX.

THE subjects of these consultations were at the moment in the full course of a sonata, and oblivious of everything else in the world but themselves, their music, and their concerns generally. A fortnight had passed of continual intercourse, of much music, of that propinquity which is said to originate more matches than any higher influence. Nothing can be more curious than the pleasure which young persons, and even persons who are no longer young, find perennially in this condition of suppressed love-making, this preoccupation of all thoughts and plans in the series of continually recurring meetings, the confidences, the divinations, the endless talk which is never exhausted, and in which the most artificial beings in the world probably reveal more of themselves than they themselves know—when the edge of emotion is always being touched, and very often by one of the pair at least overpassed, in either a comic or a tragic way. It is not necessary that there should be any real charm in either party, and what is still more extraordinary, it is possible enough that one may be a person of genius, and the other not far removed from a fool; that one may be simple as a rustic, and the other a man or woman of the world. No rule, in short, holds in those extraordinary yet most common and everyday conjunctions. There is an amount of amusement, excitement, variety, to be found in them which is in no other kind of diversion. This is the great reason, no doubt, why flirtation never fails. It is dangerous, which helps the effect. For those sinners who go into it voluntarily for the sake of amusement, it has all the attractions of romance and the drama combined. If they are intellectual, it is a study of human character; in all cases, it is an interest which quickens the colour and the current of life. Who can tell why or how? It is not the disastrous love-makings that end in misery and sin, of which we speak. It is those which are practised in society every day, which sometimes end in a heart-break indeed, but often in nothing at all.

Constance was not unacquainted with the amusement, though she was so young; and it is to be feared that she resorted to it deliberately for the amusement of her otherwise dull life at the Palazzo, in the first shock of her loneliness, when she felt herself abandoned. It was, of course, the victim himself who had first put the suggestion and the means of carrying it out into her hands. And she did not take it up in pure wantonness, but actually gave a thought to him, and the effect it might produce upon him, even in the very act of entering upon her diversion. She said to herself that Captain Gaunt, too, was very dull; that he would want something more than the society of his father and mother; that it would be a kindness to the old people to make his life amusing to him, since in that case he would stay, and in the other, not. And as for himself, if the worst came to the worst, and he fell seriously in love—as, indeed, seemed rather likely, judging from the fervour of the beginning—even that, Constance calculated, would do him no permanent harm. 'Men have died,' she said to herself, 'but not for love.' And then there is that famous phrase about a liberal education. What was it? To love her was a liberal education? Something of that sort. Then it could only be an advantage to him; for Constance was aware that she herself was cleverer, more cultivated, and generally far more 'up to' everything than young Gaunt. If he had to pay for it by a disappointment, really everybody had to pay for their education in one way or another; and if he were disappointed, it would be his own fault, for he must know very well, everybody must know, that it was quite out of the question she should marry him in any circumstances—entirely out of the question; unless he was an absolute simpleton, or the most presumptuous young coxcomb in the world, he *must* see that; and if he were one or the other, the discovery would do him all the good in the world. Thus Constance made it out fully, and to her own satisfaction, that in any case the experience could do him nothing but good.

Things had gone very far during this fortnight—so far, that she sometimes had a doubt whether they had not gone far enough. For one thing, it had cost her a great deal in the way of music. She was a very accomplished musician for her age, and poor George Gaunt was one of the greatest bunglers that ever began the study of the violin. It may be supposed what an amusement this intercourse was to Constance, when it is said that she bore with his violin like an angel, laughed and scolded and encouraged and pulled him along till he believed that he could play the waltzes of Chopin and many other things which were as far above him as the empyrean is above earth. When he paused, bewildered, imploring her to go on, assuring her that he could catch her up, Constance betrayed no horror, but only laughed till the tears came. She would turn round upon her music-stool sometimes and rally him with a free use of a superior kind of slang, which was unutterably solemn, and quite unknown to the young soldier, who laboured conscientiously with his fiddle in the evenings and mornings, till General Gaunt's life became a burden to him—in a vain effort to elevate himself to a standard with which she might be satisfied. He went to practise in the morning; he went in

the afternoon, to ask if she thought of making any expedition? to suggest that his mother wished very much to take him to see this or that, and had sent him to ask would Miss Waring come? Constance was generally quite willing to come, and not at all afraid to walk to the bungalow with him, where, perhaps, old Luca's carriage would be standing, to drive them along the dusty road to the opening of some valley, while Mrs Gaunt, not a good climber, she allowed, would sit and wait for them till they had explored the dell, or inspected the little town seated at its head. Captain Gaunt was more punctilious about his mother's presence as chaperon than Constance was, who felt quite at her ease roaming with him among the terraces of the olive woods. It was altogether so idyllic, so innocent, that there was no occasion for any conventional safeguards, and there was nobody to see them or remark upon the prolonged tête-à-tête. Constance came to know the young fellow far better than his mother did, better than he himself did, in these walks and talks.

'Miss Waring, don't laugh at a fellow. I know I deserve it.—O yes, do, if you like. I had rather you laughed than closed the piano. I had a good long grind at it this morning; but somehow these triplets are more than I can fathom. Let us have that movement again, will you?—Oh, not if you are tired. As long as you'll let me sit and talk. I love music with all my heart, but I love'——

'Chatter,' said Constance. 'I know you do. It is not a dignified word to apply to a gentleman; but you know, Captain Gaunt, you do love to chatter.'

'Anything to please you,' said the young man. 'That wasn't how I intended to end my sentence. I love to—chatter, if you like, as long as you will listen—or play, or do anything; as long as'——

'You must allow,' said Constance, 'that I listen admirably. I am thoroughly well up in all your subjects. I know the station as well as if I lived there.'

'Don't say that,' he cried; 'it makes a man beside himself. Oh, if there was any chance that you might ever—— I think—I'm almost sure—you would like the society in India—it's so easy; everybody's so kind. A—a young couple, you know, as long as the lady is—delightful.'

'But I am not a young couple,' said Constance with a smile. 'You sometimes confuse your plurals in the funniest way. Is that Indian too?—Now come, Captain Gaunt, let us get on. Begin at the andante. One, two—three! Now, let's get on.'

And then a few bars would be played, and then she would turn sharp round upon the music-stool and take the violin out of his astonished hands.

'Oh! what a shriek! It goes through and through one's head. Don't you think an instrument has feelings? That was a cry of the poor ill-used fiddle, that could bear no more. Give it to me.' She took the bow in her hands, and leaned the instrument tenderly against her shoulder. 'It should be played like this,' she said.

'Miss Waring, you can play the violin too?'

'A little,' she said, leaning down her soft cheek against it, as if she loved it, and drawing a charmingly sympathetic harmony from the ill-used strings.

'I will never play again,' cried the young man. 'Yes, I will—to touch it where you have touched it. Oh, I think you can do everything, and make everything perfect you look at.'

'No!' said Constance, shaking her head as she ran the bow softly, so softly over the strings; 'for you are not perfect at all, though I have looked at you a great deal. Look! this is the way to do it. I am not going to accompany you any more. I am going to give you lessons. Take it now, and let me see you play that passage.—Louder, softer—louder. Come, that was better. I think I shall make something of you after all.'

'You can make anything of me,' said the poor young soldier, with his lips on the place her cheek had touched, 'whatever you please.'

'A first-rate violin-player, then,' said Constance. 'But I don't think my power goes so high as that.—Poor general, what does he say when you grind, as you call it, all the morning?'

'Oh, mother smooths him down—that is the use of a mother.'

'Is it?' said Constance, with an air of impartial inquiry. 'I didn't know.—Come, Captain Gaunt, we are losing all our time.'

And then *tant bien que mal*, the sonata was got through.

'I am glad Beethoven is dead,' said Constance as she closed the piano. 'He is safe from that at least: he can never hear us play. When you go home, Captain Gaunt, I advise you to take lodgings in some quite out-of-the-way place, about Russell Square, or Islington, or somewhere, and grind, as you call it, till you are had up as a nuisance; or else'——

'Or else—what, Miss Waring? Anything to please you.'

'Or else—give it up altogether,' Constance said.

His face grew very long; he was very fond of his violin. 'If you think it is so hopeless as that—if you wish me to give it up altogether'——

'Oh, not I. It amuses me. I like to hear you break down. It would be quite a pity if you were to give up, you take my scolding so delightfully. Don't give it up as long as you are here, Captain Gaunt. After that, it doesn't matter what happens—to me.'

'No,' he said, almost with a groan, 'it doesn't matter what happens after that—to me. It's the Deluge, you know,' said the poor young fellow. 'I wish the world would come to an end first'—thus unconsciously echoing the poet. 'But, Miss Waring,' he added anxiously, coming a little closer, 'I may come back? Though I must go to London, it is not necessary I should stay there. I may come back?'

'Oh, I hope so, Captain Gaunt. What would your mother do, if you did not come back? But I suppose she will be going away for the summer. Everybody leaves Bordighera in the summer, I hear.'

'I had not thought of that,' cried the young soldier. 'And you will be going too?'

'I suppose so,' said Constance. 'Papa, I hope, is not so lost to every sense of duty as to let me spoil my complexion for ever by staying here.'

'That would be impossible,' he said with eyes full of admiration.

'You intend that for a compliment, Captain Gaunt; but it is no compliment. It means either that I have no complexion to lose, or that I am one of those thick-skinned people who take no harm—neither of which is complimentary, nor true. I shall have to teach you how to pay compliments as well as how to play the violin.'

'Ah, if you only would!' he cried. 'Teach me how to make myself what you like—how to speak, how to look, how'——

'Oh, that is a great deal too much,' she said. 'I cannot undertake all your education.—Do you know it is close upon noon? Unless you are going to stay to breakfast'——

'Oh, thanks, Miss Waring! They will expect me at home. But you will give me a message to take back to my mother. I may come to fetch you to drive with her to-day?'

'It must be dreadfully dull work for her sitting waiting while we explore.'

'Oh, not at all. She is never dull when she knows I am enjoying myself—that's the mother's way.'

'Is it?' said Constance, with once more that air of acquiring information. 'I am not acquainted with that kind of mother. But do you think, Captain Gaunt, it is right to enjoy yourself, as you call it, at your mother's cost?'

He gave her a look of great doubt and trouble. 'Oh, Miss Waring, I don't think you should put it so. My mother finds her pleasure in that—indeed, she does. Ask herself. Of course, I would not impose upon her, not for the world; but she likes it, I assure you she likes it.'

'It is very extraordinary that any one should like sitting in that carriage for hours with nothing to do.—I will come with pleasure, Captain Gaunt. I will sit with your mother while you go and take your walk. That will be more cheerful for all parties,' Constance said.

Young Gaunt's face grew half a mile long. He began to expostulate and explain; but Waring's step was heard stirring in the next room, approaching the door, and the young man had no desire to see the master of the house with his watch in his hand, demanding to know why Domenico was so late. Captain Gaunt knew very well why Domenico was so late. He knew a way of conciliating the servants, though he had not yet succeeded with the young mistress. He said hurriedly, 'I will come for you at three,' and rushed away. Waring came in at one door as Gaunt disappeared at the other. The delay of the breakfast was a practical matter, of which, without any reproach of medievalism, he had a right to complain.

'If you must have this young fellow every morning, he may at least go away in proper time,' he said, with his watch in his hand, as young Gaunt had divined.

'O papa, twelve is striking loud enough. You need not produce your watch at the same time.'

'Then why have I to wait?' he said. There was something awful in his tone. But Domenico was equal to the occasion, worthy at once of the lover's and of the father's trust. At that moment, Captain Gaunt having been got away while the great bell of Bordighera was still sounding, the faithful Domenico threw open, perhaps with a little more sound than was necessary, an ostentation of readiness, the dining-room door.

The meal was a somewhat silent one. Perhaps Constance was pondering the looks which she had not been able to ignore, the words which she had managed to quench like so many fiery arrows before they could set fire to anything, of her eager lover, and was pale and a little preoccupied in spite of herself, feeling that things were going further than she intended; and perhaps her father, feeling the situation too serious, and remonstrance inevitable, was silenced by the thought of what he had to say. It is so difficult in such circumstances for two people, with no relief from any third party, without even the wholesome regard for the servant in attendance, which keeps the peace during many a family crisis—for with Domenico, who knew no English, they were as safe as when they were alone—it is very difficult to find subjects for conversation that will not lead direct to the very heart of the matter which is being postponed. Constance could not talk of her music, for Gaunt was associated with it. She could not speak of her walk, for he was her invariable companion. She could ask no questions about the neighbourhood, for was it not to make her acquainted with the neighbourhood that all those expeditions were being made? The great bouquet of anemones which blazed in the centre of the table came from Mrs Gaunt's garden. She began to think that she was buying her amusement too dearly. As for Waring, his mind was not so full of these references, but he was occupied by the thoughts of what he had to say to this headstrong girl, and by a strong sense that he was an ill-used man, in having such responsibilities thrust upon him against his will. Frances would not have led him into such difficulties. To Frances, young Gaunt would have been no more interesting than his father; or so at least this man, whose experience had taught him so little, was ready to believe.

'I want to say something to you, Constance,' he began at length, after Domenico had left the room. 'You must not stop my mouth by remarks about middle-aged parents. I am a middle-aged parent, so there is an end of it.—Are you going to marry George Gaunt?'

'I—going to marry George Gaunt! Papa!'

'You had better, I think,' said her father. 'It will save us all a great deal of embarrassment. I should not have recommended it, had I been consulted at the beginning. But you like to be independent and have your own way; and the best thing you can do is to marry. I don't know how your mother will take it; but so far as I am concerned, I think it would save everybody a great deal of trouble. You will be able to turn him round your finger; that will suit you, though the want of money may be in your way.'

'I think you must mean to insult me, papa,' said Constance, who had grown crimson.

'That is all nonsense, my dear. I am suggesting what seems the best thing in the circumstances, to set us all at our ease.'

'To get rid of me, you mean,' she cried.

'I have not taken any steps to get rid of you. I did not invite you, in the first place, you will remember; you came of your own will. But I was very willing to make the best of it. I let Frances go, who suited me, whom I had brought up—for your sake. All the rest has been your doing. Young Gaunt was never invited by me. I have had no hand in those rambles of yours. But since you find so much pleasure in his society'——

'Papa! You know I don't find pleasure in his society; you know'——

'Then why do you seek it?' said Waring with that logic which is so cruel.

Constance, on the other side of the table, was as red as the anemones, and far more brilliant in the glow of passion. 'I have not sought it,' she cried. 'I have let him come—that is all. I have gone when Mrs Gaunt asked me. Must a girl marry any man that chooses to be silly? Can I help it, if he is so vain? It is only vanity,' she said, springing up from her chair, 'that makes men think a girl is always ready to marry. What should I marry for? If I had wanted to marry—— Papa, I don't want to be disagreeable, but it is *vulgar*, if you force me to say it—it is common to talk to me so.'

'I might retort,' said Waring.

'O yes, I know you might retort. It is common to amuse one's self. So is it common to breathe and move about, and like a little fun when you are young. I have no fun here. There is nobody to talk to, not a thing to do. How do you suppose I am to get on? How can I live without something to take up my time?'

'Then you must take the consequences.'

In spite of herself, Constance felt a shiver of alarm. She began to speak, then stopped suddenly, looked at him with a look of mingled defiance and terror, and—what was so unlike her, so common, so weak, as she felt—began to cry, notwithstanding all she could do to restrain herself. To hide this unaccountable weakness, she hastened off and hid herself in her room, making as if she had gone off in resentment. Better that, than that he should see her crying like any silly girl. All this had got on her nerves, she explained to herself afterwards. The consequences! Constance held her breath as they became dimly apparent to her in an atmosphere of horror. George Gaunt, no longer an eager lover, whom it was amusing, even exciting to draw on, to see just on the eve of a self-committal, which it was the greatest fun in the world to stop, before it went too far—but the master of her destinies, her constant and inseparable companion, from whom she could never get free, by whom she must not even say that she was bored to death—gracious powers! and with so many other attendant horrors. To go to India with him, to fall into the life of the station, to march with the regiment. Constance' lively imagination pictured a baggage-wagon, with herself on the top, which made her laugh. But the reality was not laughable; it was horrible. The consequences! No; she would not take the consequences. She would sit with Mrs Gaunt in the carriage, and let him take his walk by himself. She would begin to show him the extent of his mistake from that very day. To take any sharper measures, to refuse to go out with him at all, she thought, on consideration, not necessary. The gentler measures first, which perhaps he might be wise enough to accept.

But if he did not accept them, what was Constance to do? She had run away from an impending catastrophe, to take refuge with her father. But with whom could she take refuge, if he continued to hold his present strain of argument? And unless he would go away of himself, how was she to shake off this young soldier? She did not want to shake him off; he was all the amusement she had. What was she to do?

There glanced across her mind for a moment a sort of desperate gleam of reflection from her father's words: 'You like to be independent; the best thing you can do is to marry.' There was a kind of truth in it, a sort of distorted truth, such as was likely enough to come through the medium of a mind so wholly at variance with established forms of truth. Independent—there was something in that; and India was full of novelty, amusing, a sort of world she had no experience of. A tremor of excitement got into her nerves as she heard the bell ring, and knew that he had come for her. He! the only individual who was at all interesting for the moment, whom she held in her hands, to do what she pleased with. She could turn him round her little finger, as her father said: and independence! Was it a Mephistopheles that was tempting her, or a good angel leading her the right way?

THE DANGERS OF THE INDIAN JUNGLE.

THE accounts published from time to time by the government of India, showing the loss of life occasioned annually by snake-bites and the ravages of wild animals, still bear witness to a terrible mortality attributable to these scourges of our eastern possessions, and we might add, afford a clear proof that the present exertions of the government of India are inadequate for the purpose. The latest return published in the *Gazette* tells the truly awful tale, that in the year 1883 upwards of twenty-two thousand lives were lost from the above-mentioned causes. Nor can the returns rendered by district officers be considered as altogether complete or satisfactory, for, owing to the apathy of the natives of India and the almost universal belief among them of the 'decrees of fate,' many cases of death by snake-bite are never reported, and altogether escape the notice of the authorities. Then, again, it should be remembered that the government returns which give the number of deaths attributable to snakes and wild beasts, only include cases in *British* India, leaving altogether unrecorded the mortality from the same causes in large independent states, such as Jeypore, Gwalior, Rewah, and many others. Moreover, the British system of keeping down wild beasts and noxious reptiles does not obtain in these large tracts of territory under independent rajahs. There, natives are not encouraged by rewards to make the destruction of tigers, panthers, and others of the felidæ—as also cobras and other deadly snakes—a genuine pursuit and means of gaining a livelihood. Thus it comes to pass that in out-of-the-way parts, away from our jurisdiction, the loss of life from the above-mentioned causes

shows little or no diminution, but remains very much as in the days of old before we acquired India.

Among the wild animals figuring in the list as destructive to human life, the tiger naturally holds a prominent place; the deaths of no fewer than nine hundred and eighty-five human beings are laid to his charge; and yet the animal, if left unmolested and not provoked in any way, will seldom attack human beings. The truth is, tigers, as a rule, are cowards, only too willing to slink away on the approach of man. In former years—speaking chiefly of our own territories in British India—when tigers were much more common than they are nowadays, man-eaters were by no means rare. It was in those times nothing uncommon to hear of high-roads stopped, large tracts of country left uncultivated, villages deserted, and permitted to fall to ruin, owing to the ravages of these dreaded creatures. Now, however, man-eaters have been nearly exterminated; occasionally one is heard of; but almost invariably his evil deeds attract the attention of the civil officer of the district, and an organised expedition is sent in search of the marauder, and eventually the animal is killed, either by the rifle of an English sportsman, or by the matchlock of some local shikarie.

How, then, it will naturally be asked, if man-eaters are so rare, does it come to pass that nearly a thousand unfortunate creatures lose their lives in a single year by tigers? In the first place, although man-*eating* tigers are now fortunately rare, yet there can be no doubt that the tiger when suddenly come upon in his lair, or met accidentally face to face when on the move, will, on the spur of the moment—more from fear, probably, than anything else—strike down any one barring his way, and pass swiftly on. Casualties of this kind often occur in wooded parts of the country. A tigress with young is especially dangerous, and will often furiously attack any one approaching the spot where the cubs are.

Again, cattle-keepers, or *gwallas* as they are termed in Bengal, often lose their lives by courageously exposing themselves when endeavouring to rescue some one of their charges from the clutches of the destroyer. At such times the tiger is especially dangerous. He has probably tasted blood, and often will not surrender his prey without a struggle. Should a body of men keeping close together approach him as he crouches growling behind the bullock he has dragged to the ground, he will sometimes slowly and reluctantly beat a retreat; but often rendered furious by a shower of sticks and stones cast at him and by the shouts of his daring assailants, he charges out with flashing eye and a roar of rage, and strikes down one or more of his assailants.

A prevalent cause of death occasioned by snake-bites, &c., is the almost universal habit among the poorer classes of natives of travelling by night during the hot-weather months. It is exceptional to meet with a cobra during the daytime; but after sunset reptiles sally forth in search of food. A native, generally speaking, walks barefooted, or wears only a low shoe, which affords no protection to the ankle or leg. In the darkness, he treads upon or touches some deadly snake, is immediately bitten, and probably before daylight, lies a corpse by the roadside.

The same reckless custom of passing after sunset through jungles inhabited by all kinds of wild beasts, is, though in a less degree, a constant source of danger, frequently ending in death. It has already been remarked that the tiger, if left unmolested, will seldom interfere with man, but more often, when disturbed in the daytime, will slink off with a surly growl of fear. This rule, however, certainly does not hold good with equal force after nightfall. Then wild animals are all on the prowl after prey, and they seem to be perfectly aware of the advantage they possess over human beings of a vision specially adapted by nature to penetrate the pitchy darkness of the night. Not only, therefore, is there a greater probability of travellers meeting with dangerous animals when passing through the forest after sunset, but the tiger and his comrades of the jungle are then bolder and more to be feared; and though the tiger be a coward at heart, yet, under cover of darkness, and perhaps pinched with hunger, the sound of voices in the dead stillness of the night entices the brute to approach the roadway; and a string of defenceless natives, passing within a few yards of his lurking-place, still further awakens his evil instincts. The temptation proves too great, and with a bound, he springs upon one of the hapless travellers and carries off his shrieking victim.

We are told in the *Gazette*, that in the year 1883, no fewer than forty-seven thousand four hundred and seventy-eight head of cattle were devoured by wild animals; and there can be no doubt that the tiger is extremely mischievous in this respect, and in consequence lays a very severe tax on natives inhabiting villages bordering upon large forests or anywhere near to his stronghold. A pair of royal tigers will probably kill and devour from ten to twelve bullocks of large size within a month's time; and a tigress with two or three nearly full-grown cubs is still more destructive. The latter, not content with pulling down cattle for food, will often, out of pure mischief, destroy two and three at a time.

There are tigers which live almost entirely on large game, such as deer and wild pigs, seldom approaching villages or the haunts of man; but, unfortunately, the great majority depend almost entirely on cattle for food; and this is not to be wondered at. The ruminants of the forest are timid, restless creatures, ever on the lookout against danger, so that it happens constantly that, in spite of the crafty, noiseless approach of their striped enemy, he is discovered ere he can creep to within springing distance. The tiger, however, is often more successful when lying in wait hard by some pool of water in the jungles. After a long hot day, towards nightfall, deer, parched with thirst, are often impatient to reach the precious water, and incautiously approach without perceiving their hidden enemy.

But the tiger soon discovers that he can provide himself with food with far less trouble and exertion by preying on cattle. Not only is stalking them an easy task when the herd is grazing on the outskirts of the jungle, but often—unlike deer, which bound away almost immediately on discovering their lurking enemy—a

herd of cattle will stand spell-bound, paralysed with fear, their whole attention fixed upon the striped marauder grovelling along the ground and rapidly approaching to within springing distance. Then, when too late to make their escape, the foolish creatures turn to fly; but with a bound, the tiger is upon them, and seizing a victim in his terrible grip, brings it to the ground, and kills it with one wrench of his powerful jaws.

The Asiatic lion, from certain characteristics, such as the almost total want of a mane in the male, and its smaller size, was formerly held to be of a different species from the lion of Africa; but naturalists are now inclined to consider the two animals identical. Little is known of the habits of the Indian lion, and except in Cutch, Guzerat, and one or two other spots in the Bombay presidency, it has become extremely rare. Sportsmen who have met with and shot the animal describe it as dangerous when wounded and followed up; but, like the tiger, unless provoked, the Indian lion almost invariably endeavours to make off on being disturbed. Nor does the animal appear to be nearly so bold and dangerous after nightfall, as is the case with the African lion. A crouching lion in long grass or bushes, even in comparatively bare open ground, is more difficult to distinguish than the tiger, on account of the tawny hide exactly matching the colour of the surroundings. It may be here mentioned that it is a mistake to suppose that the male lion in its wild state carries the long flowing mane that we see in specimens shut up in cages. The lion often inhabits dense thorny thickets; and his mane, from constant 'combing' and wear and tear when passing through prickly bushes, becomes shortened in a measure, and wants the flowing luxuriance of hair so marked in our caged specimens. The Indian lion, though an inveterate cattle-killer like his striped brother, seldom, if ever, takes to devouring human beings.

The panther and leopard both in a great measure bear a similar character to the royal tiger; they seldom will attack man, unless provoked, driven to bay or wounded, when, like all the larger felidæ, they become highly dangerous, and lives are often lost in their pursuit on foot. Instances now and again occur of both these animals showing unusual ferocity and taking to man-killing; but fortunately this habit is exceptional. The panther of Central India—a large powerful beast—is held to be, by many experienced sportsmen, as also by native hunters, a more dangerous animal to cope with than the tiger; and both panther and leopard ascend trees with facility, a power fortunately denied to the tiger.

Not many years ago, an officer seated in a tree in company with a native fired at a panther passing below, wounding the creature severely. The panther sprang up the stem of the tree, dragged the unfortunate sportsman down to the ground, mauling him so dreadfully that he died soon after; and then actually ascended the tree a second time and killed the shikarie.

The panther, like the tiger, is direfully mischievous in killing cattle; and the leopard continually harries the flocks and herds of the villagers, often taking up its abode within a few hundred yards of the houses. Since the time of the Indian Mutiny, when the country was disarmed, leopards have greatly increased in many parts, more especially in our hill territories. In former days, almost every village possessed two or three guns; now, however, only certain individuals bearing a license from the authorities carry firearms, and in consequence, wild animals are not sufficiently killed down.

The leopard is particularly addicted to carrying off dogs. The animal will seldom face a powerful dog in the open; but by creeping up unperceived and waiting for a favourable opportunity, it suddenly takes the dog at a disadvantage, fastening on to its neck, and seldom quitting its hold till the strength of its victim is exhausted. In spite of broad iron collars garnished with spikes for a protection, large-sized, valuable sheep-dogs are very often carried off by leopards in the valleys of the Himalaya.

Included in our Indian carnivora are three species of bears. Two of these, the brown and Himalayan black bear, are confined to our northern hill regions. The third species (*Ursus labiatus*) is only found in the plains of India, or rather in our lower ranges of hills, for it is found in the Neilgherries of Madras. The last-named species never eats flesh, subsisting chiefly on wild fruit, various roots, grain, termites, and honey; but the two Himalayan species undoubtedly occasionally kill sheep, goats, and cows, and devour the flesh.

A number of deaths are annually laid to the charge of the bear tribe. Woodcutters are often brought in terribly torn and disfigured. Sometimes individual cases occur when the bear attacks a man without the slightest provocation. A she-bear with cubs is perhaps more jealous of human beings approaching her young than any other quadruped. She will at such times furiously attack and pursue any one coming near to her whelps, often inflicting terrible wounds with her teeth and claws; but *never*, as we so constantly read, does she, on coming to close quarters, attempt to *hug or squeeze* a man in her powerful grasp.

Though in general nocturnal, all three species of the Indian bear will sometimes be met with in the daytime, more especially during the rainy season, when the grass and jungle grow thick and matted. At such times, in out-of-the-way spots where the forest remains undisturbed, the Himalayan black bear will be met with searching for acorns below clumps of oak-trees, or amidst the branches gathering the fruit; and just before nightfall, a black shuffling object will sometimes be met with on the public road. But, as a rule, if left alone, a bear will seldom molest a human being.

One other animal of the carnivora, the 'Bhériá' or 'Indian wolf,' has to be noted to complete the list, and this animal justly carries a bad reputation for destroying life. There is something peculiarly horrible in the character of the Indian wolf. He hardly ever will face a man or a woman, but makes children his chief prey. In some of our northern provinces, more especially Oude and parts of Rohilkund, as also throughout the north-western provinces of Bengal, the loss of life from wolves is terribly great. Unlike the larger felidæ,

which are all nocturnal in habits, the wolf—which belongs to the Canidæ family—constantly wanders about in search of prey in the daytime. At night, young children are often taken from their beds, or when lying asleep in the open air. It is the habit of the animal to lie in wait in some patch of sugar-cane or Indian corn in close proximity to a village. There the fell brute bides his time, watching a party of poor naked urchins at play, till presently one of the group strays from his comrades and approaches near to the crouching foe. There is a sudden cry, and a glimpse of a brown object making off. But a rescue is seldom effected in time, for the wolf generally destroys his victim before assistance can be rendered. J. H. B.

MR MOSSOP'S WILL.

IN THREE CHAPTERS.—CHAP. III.

Mr Goulding again had John for his driver, and on this occasion made no secret of the fact that Mrs Reddie had come in for all the property. The man had very likely heard as much before, but he seemed pleased, for the lady was a general favourite at 'The Firs.'

Presently he said: 'I don't like that little man, sir—him as come with Sir Peter.'

'Why?'

'Well, sir, they come out to the stables, to look round they said; but they was only trying to pump me. Mr Crooks, he says to me: "Weren't you one of the witnesses to your master's will?" and when I told him I wasn't, he begins to talk about something else. But after a while he comes at me again, and he says: "I believe your poor master was wandering a good deal before he died." "I didn't hear that, sir," I says; "he was always pretty hard in the head." So then he says: "It was on Wednesday Mr Goulding came down from London first, wasn't it?" "Yes, sir," I says; and then he asks: "Well, how was it he came back on Thursday?" "I don't know, sir," I says; "but I think I see him over there; maybe you 'd like to talk to him?" So at that he made off, and dragged Sir Peter with him.'

Mr Goulding laughed at this story; but he felt a little uneasy and annoyed, nevertheless. He did not talk much during the drive, for his thoughts were occupied with the events of the last few days, and he was wondering whether there would be any news for him when he reached London. The case now stood thus: if the will were found within a few days, all would be well. If it were not, and Sir Peter came to hear of the circumstances, it was probable that the clever Mr Crooks would urge him to apply for letters of administration. Mr Goulding could then delay their further progress by entering what is called a *caveat*, which would cause the matter to be brought into court. If, however, the will were not recovered by the time the case came to be heard, the court would grant administration to Sir Peter Mossop as next of kin. It might, of course, come to light afterwards; but possession is nine points of the law, and as the baronet would in that event be more likely to dispute it, endless litigation and expense might result. Of course the document must be in existence somewhere; but the danger was that if the person who held it should make inquiries, and find out that it would be worth so much to Sir Peter, he might offer to sell it to him, and the temptation would be too strong for the impecunious baronet to resist, especially if he were guided by his trusty counsellor, David Crooks. The latter would, no doubt, be satisfied if his client got even temporary possession of the estate, as that would give him a sufficient opportunity of fleecing his victim.

It was to be hoped, however, that none of these disagreeable possibilities would be realised; at all events, Mr Goulding had a little time at his disposal in which to act. He did not care much about his own legacy, but it troubled him exceedingly to think that, by his unfortunate negligence, he might be the means of keeping Mrs Reddie and her family out of their fortune. Besides, when the affair came to be known, as it undoubtedly would, his professional reputation would be seriously injured, and the firm would suffer in consequence. Altogether, he felt his position so acutely, that had he been sufficiently wealthy, he would have made the loss all his own, large as it was.

In passing through Crewe, he once more called at the Inquiry Office, but with a like result. The railway people had heard nothing more about the bag, and as they were not liable for the loss of anything that was in the passenger's own care, it is likely they did not trouble themselves much on the subject. Mr Goulding, travelling by the same train as on the previous Thursday, reached home about the same hour, but only to find that there was no message about the missing will awaiting him. He passed a restless night, and went down to his office betimes on the following morning, to the surprise of the junior clerk, who arrived at the same moment. When Mr Shuttleworth walked in, nearly an hour later, it was only another disappointment for his partner. He had been round to Poynter's the evening before, but the ex-detective had nothing to communicate. Mr Goulding's spirits fell considerably on hearing this, for he had fully expected that the offer of fifty pounds would lead to the restoration of the papers; but he concluded that perhaps the thief was waiting for better terms, and so determined to make the reward a hundred. He paid a visit to Mr Poynter shortly afterwards, to announce his intention and consult; and at this interview the conductor of private inquiries assumed his most profound and knowing air, and favoured the solicitor with a great deal of oracular wisdom, which was taken for what it was worth.

'You see,' he said, 'the party that's got it knows—if he knows anything—that it's good for a lot more than fifty. Of course he's aware that he'll have to give it up in the long-run, because he sees my name to the advertisement. I've got my eye on him, so to speak, and I always track these fellows out before I stop.'

'I'm greatly afraid you haven't got your eye on this fellow,' said the solicitor, whose patience was sorely tried by this inflated style of talking. It might have done very well with simple folk, he thought, but ought not to have been assumed towards him, an experienced man of law.

'Well, if you were to send me down to Crewe for a week, I have no doubt it would shorten

the chase. I have two or three important cases in hand, but I would manage to leave them over to oblige you.'

'No, thank you,' said Mr Goulding, coldly.

'But of course, as I was saying before,' Mr Poynter continued, 'he knows it's worth a lot more than fifty, and he's holding out for something bigger.'

'Well, we must try whether a hundred will tempt him.'

'Yes, we can try, Mr Goulding. You see, *you* have your idea of how it was stolen, and *I* have *mine*—*I* have *mine*,' Mr Poynter repeated impressively, shutting his eyes and thrusting his hands into his pockets.

But all this was thrown away on Mr Goulding, who adhered to his determination to simply increase the reward, believing that to be the only plan likely to succeed; although the private inquirer would have been very glad to pocket a few pounds by a wildgoose chase to Crewe.

'Anyhow, it's a good thing you came to me first about it,' the latter continued, as Mr Goulding was leaving. 'It was much better than letting your own name be known.'

The solicitor returned to his office in better spirits, hoping great things from the offer of a hundred pounds; but, though the new advertisements duly appeared the following day, another week slipped by without any result whatever.

The case was now growing desperate, and as a last resource, it was decided to offer a still more tempting reward of two hundred and fifty pounds. This time, however, a note was appended to the announcement, stating that no further reward would be offered. And now ensued an anxious time for Mr Goulding. Many messages passed between him and Mr Poynter; many discussions took place between the solicitors themselves. Mr Shuttleworth was of opinion that Mr Goulding's fellow-passenger was the culprit; while Mr Goulding thought it was either the woman who opened the carriage-door, or some one who had been standing by at the moment. The more they argued, the more positive Mr Shuttleworth became; in fact, so convinced was he, that he longed to hand a description of the gentleman to the police.

There was one scrap of consolation for them; it was evident the holder of the will had not as yet negotiated with Sir Peter Mossop, as in that case the baronet would probably have bought it in at once and laid claim to the estate; or, if he had been so honourable as to refuse, the document would have been restored to the rightful owners. However, the crisis was reached when one day Messrs Shuttleworth and Goulding were waited on by a Mr Keene—a second-rate London solicitor—who said that he was acting for Mr Crooks of Wrexham, who had asked him to call, on behalf of Sir Peter Mossop, with reference to the will of his deceased relative.

'Perhaps I am taking a liberty,' he said; 'but I have come only to save trouble. Sir Peter understands that the will has not been proved yet, and indeed it would appear that grave doubts might arise as to its validity. Under these circumstances, he is advised to apply for letters of administration as next of kin, if probate be not applied for by you within the next few days; or if it be, to dispute the will, unless an amicable arrangement can be effected. My instructions now are merely to ask your intentions, if you have no objection to state them.'

Both partners were present at the interview, and neither of them spoke for a few moments after Mr Keene had concluded. The question was indeed one which required a little time for reflection. It was plain that Sir Peter, or his solicitor, suspected that there was something wrong about the will, or that it was not forthcoming; but as to entertaining doubts of its validity, that was only an empty threat, designed to frighten the legatees into buying off the baronet with a share of the estate.

If the latter had really contemplated challenging the will, he—or Mr Crooks for him—would have taken action at once, instead of parleying in this way. Of course Crooks and his client had endeavoured to take them by surprise in getting Mr Keene to call, and not communicating by letter, which would have allowed time to consider the reply; and they thought, no doubt, that the London firm would be entrapped into making some indiscreet admission. But Mr Shuttleworth was a shrewd old fellow, and not to be caught in that way.

'We don't for a moment consider that Mr Mossop's will is open to question,' he said; 'and, for my own part, I should be sorry if Mr Crooks buoyed up his client with groundless expectations that could only lead to further expense and disappointment.'

'Quite so,' assented Mr Goulding, who was feeling very nervous.

'And as to the probate,' Mr Shuttleworth continued, 'we hope to attend to that matter in a day or two, if possible.—That is all the information I can give you, sir,' he added, and bowed Mr Keene out before that gentleman could renew the subject.

When he was gone, Mr Goulding gave a sigh of relief. 'You got out of that very well,' he observed; 'but I have grave fears as to how the affair will end.'

'It is a perfect mystery,' said Mr Shuttleworth; 'for unless we suppose that the thief is expecting a still larger reward, in spite of the announcement that this was final, there is no possible solution of it that I can see. The bag and the will and other papers must be in *somebody's* possession. If the person is honest, he can easily restore them, for our address is on them all: if he is dishonest, there is the two hundred and fifty pounds to tempt him; or he might try what he could get from Sir Peter, if he knew the circumstances and thought our offer too small.'

'I am afraid we can't hold out much longer, however,' said Mr Goulding, as he set forth on another fruitless journey to Poynter's office.

It may perhaps appear strange that the solicitors had not engaged the services of a Scotland Yard detective. It was not, however, that they undervalued the skill of those officers, but at first they had both felt so confident that the reward would be sufficient to recover the will, that they had not taken any other steps, except of course that Mr Goulding had given information at the Crewe police office. Now that some time had elapsed, to track the thief would be an absolutely hopeless task, for

they had no tangible clue to go upon. Had a bundle of bank-notes been stolen, there would have been a chance of tracing them by the numbers, because the thief would naturally attempt to circulate them; but a will was worth nothing to any one but the parties concerned. Under the circumstances, they could do nothing but await the course of events.

A few more days passed and Mr Goulding was at his wits' end. He was harassed with letters from Mrs Reddie anxiously asking for news. She had shut up her house at Manchester, and taken her three younger daughters to stay with her at 'The Firs;' so it seemed as if they were determined to make good use of that residence while they could, even though they should lose the property after all. The Misses Reddie were beginning to fret, their mother said, at the prolonged suspense; while their prospects of being emancipated from poverty (and spinsterhood) no doubt became each day fainter. The melancholy effects of the loss were beginning to be felt even in Mr Goulding's household. Mrs Goulding, who was taken into her husband's confidence about this matter, found him growing morose and irritable, and was not permitted to indulge in her favourite songs, which, he said, jarred on his nerves. The three young Gouldings also shared in the general depression, and were banished to the nursery on the slightest provocation. There were two little girls, aged about eight and six, and a little boy of four. The latter was called Arthur after his father, and had always been much petted; but now he was so persistently snubbed, that one evening he confided to his elder sister his intention of leaving the house, and looking out for another Pa, if his own Pa 'kept on being so nasty.' Altogether, the approaching festive season promised to be dreary enough; but this state of things was not to last for ever.

On the afternoon of Monday, the 5th of December, the senior partner had gone home early, and Mr Goulding was sitting in his private office alone. That very day he had received a letter from Mrs Reddie, stating that, after consulting with her children, she had come to the determination to end the suspense if possible, and make terms with Sir Peter by undertaking not to claim the property in the event of the will turning up afterwards, on condition of his allowing her and her daughters a substantial annuity. Mr Goulding did not like this proposal at all. The baronet did not as yet even know that the will was lost, though he might have suspected it; but to make these overtures to him would be to show their hand. If Sir Peter acted for himself, indeed, there might be a chance of his consenting to a compromise; but he would doubtless be in the hands of Crooks, who was so avaricious that he would be sure to make the most of the opportunity, and give the Reddies nothing. Besides, Mr Goulding felt that it would be too bad if the bulk of the property went to Sir Peter after all, in spite of the testator's wishes, and without making a fight for it. He had begun to write a reply to Mrs Reddie, urging her to wait a little longer, when one of the clerks came to say that a gentleman wished to see him.

'Who is he?' Mr Goulding asked.

'He wouldn't give his name, sir; but he said he must see one of the firm.'

'Show him in then,' said the solicitor wearily, as he laid down his pen; and presently the gentleman entered.

He was a tall man, with gray hair and whiskers, but slightly bald. His face was careworn, but refined, and his eyes were clear and kindly-looking. He wore a long, heavy overcoat, and his throat was muffled up to the chin, his coat-collar being also turned up. His age might have been sixty years. He took the chair which Mr Goulding indicated, keeping as much in the shadow as possible; and, after a moment's hesitation, began the conversation with a little nervousness of manner.

'I believe I am speaking to Mr Goulding?'

The solicitor bowed.

'Did you not lose a bag lately, with some papers in it?'

'Yes, yes!' exclaimed Mr Goulding, turning pale in his eagerness. 'What of it? Do you know where it is?'

'It is quite safe. But I must make one condition, or rather ask one favour of you, and that is, that you will not seek to know my name, or anything beyond what I shall tell you myself.'

'Oh, certainly, certainly!—But is there a will in the bag? Where is it?'

'The bag is here, and the will also; and I thought it best to bring it straight to you,' said the gentleman, with a slight smile, as he produced a paper parcel.

Mr Goulding hastily tore it open, and there, sure enough, was his bag; and in it were various papers and the precious will itself. For a minute he was quite unable to speak; then he seized the gentleman's hand and shook it vigorously.

'My dear sir,' he said, 'you are the most welcome visitor I've had for many a long day! But tell me about it; I can't understand it at all.'

'I will tell you,' said the gentleman, with a touch of sadness in his tone; 'but I hope you will not repeat more of the story than is necessary. I found your papers in my house only yesterday. The bag was taken—I do not know exactly under what circumstances—but it was taken by my wife.'

'Your wife?'

'Yes. She is provided with every luxury, for I am rich; but she is afflicted with that failing called kleptomania, and this is not the first time it has led to unhappy results. She takes everything she can lay her hands on, I am sorry to say, when she thinks it can be done safely; and I have no doubt she took your bag, though she says she found it. But how did it occur?'

Mr Goulding briefly explained the circumstances.

'Then the advertisement in the papers is yours?'

'Yes.'

'I guessed as much. My wife was travelling at the time with her maid, and had to change at Crewe, so it must have been she who looked into your compartment. I suppose, seeing the bag close to her hand, she took it and concealed it under her cloak without the knowledge of

her attendant. It happened, fortunately, that I had occasion to open a private drawer of hers yesterday, where I saw the bag; but when I questioned her about it, she said she found it in the train, which, as I feared, was not exactly true. I live more than a hundred miles from London; but I lost no time in coming up to restore it. And now I hope there is nothing missing?'

'It is all right, I am happy to say,' Mr Goulding replied. (He did not mention the thirty shillings, which it appeared the lady had kept.)

'Then I will go,' said the gentleman; 'but I am very sorry if this has caused any serious inconvenience.'

'Well, of course it has worried us; but that is past; and I thank you very much for coming so promptly to take a load off my mind.'

Then they shook hands, and the strange gentleman withdrew; but who or what he was the partners never discovered.

Mr Goulding immediately telegraphed to Mrs Reddie, who was of course overjoyed at the news. And now no time was lost about proving the will, which Sir Peter Mossop and his adviser were sensible enough not to oppose. The former, however, wrote to Mrs Reddie to ask for the loan of three hundred pounds, which, in the fullness of her heart, she sent him, and which, in the fullness of *his* heart, he forgot to repay. Two hundred of it he paid to Crooks, on account of certain bills, and the other hundred covered his losses at cards during the ensuing month.

Mr Poynter, of the Private Inquiry Office, was not altogether pleased at the matter being settled without his intervention; but he reminded Mr Goulding that he always had his own idea of how the will was stolen.

Mrs Reddie and her daughters took up their residence at 'The Firs' permanently. The former liberally carried out Mr Mossop's intentions respecting legacies to the servants, who, under her rule, agreed together better than formerly; besides which, they were now called by their own proper names, instead of the *aliases* forced on them by their late master. Lastly, harmony reigned once more in the Goulding family; and Master Arthur, having repented of his intention to leave the parental roof and look for another 'Pa,' received his own original 'Pa' back into favour.

ELECTRIC LOCOMOTION.

ELECTRIC RAILWAYS.

Electric railways are of very recent origin, as it is only since the invention and perfection of the modern dynamo-electric machine, and its converse the electric motor, that it has become possible to practically work such railways. The essentials of an electric railway are (1) a generator or source of power, such as a steam-engine or water-wheel; (2) a dynamo-electric machine, in which the energy of the coal or water is converted into electricity; (3) a pair of conductors, by which the electricity is conveyed to and fro between the electric motor and dynamo; and (4) an electric motor, in which the electricity is reconverted into mechanical power, and applied to turn the wheels of the train. An electric railway is thus simply an instance of the transmission of power from a near to a distant point, the medium of transmission being the electric current. Electricity for this purpose may be obtained from coal, mountain streams, tidal power, or any other source of energy. The conductors consist of a 'going' and 'returning' wire, or other metal conductor, well insulated from one another; and means must be provided for keeping up a constant electrical communication between these conductors and the poles of the motor on the moving train.

A dynamo-electric machine consists of an armature composed of coils of insulated wire mounted on a spindle, and of electro-magnets closely surrounding this armature. The forcible rotation of the armature in the presence of the magnets gives rise to the electric current. Let two such machines have their terminals joined by conductors, and the first machine be driven by some source of power. The current generated in the first machine passes into the second machine, and causes its armature to rotate in the opposite direction to that of the first machine. Thus the current is re-converted into mechanical motion, and the power given out by the second machine will be equal to that given to the first machine, less certain unavoidable losses due to friction and to the heating of the machines and conductors. The second machine is in this case called an electric motor.

An electric railway was first exhibited by Dr W. Siemens at the Berlin Exhibition in 1879. The current was conveyed by a central rail to the motor on the moving car, and returned by the two working rails on which the car ran. The line was nine hundred yards long, with a two feet gauge. The success attending this experimental railway led to the laying of the Lichterfelde line in Berlin, in which the working rails were laid on insulating wooden sleepers, one rail acting as the 'outgoing' circuit, and the other as the 'return' circuit. This line is two thousand five hundred yards long, with a three feet three inch gauge, and is worked by two dynamo-machines developing about twelve horse-power. It has been in constant use since it was opened in May 1881. The electric railway at the Paris Exhibition in 1881 was used to convey passengers to and from the Exhibition, ninety-five thousand persons being carried by it in the space of seven weeks. As some objection was made to the employment of the rails as conductors, on account of the supposed danger to men or animals, overhead conductors were used in this case. These consisted of hollow metallic tubes, suspended from the tops of posts, and having continuous longitudinal slits, contact being made by a metallic bolt drawn through the tubes by flexible cables attached to the car. In the same year, an electric railway was exhibited at the Crystal Palace, Sydenham, in which both the ordinary rails were used as the 'return' conductor, and a third insulated rail was used as the 'going' conductor. The car was similar to an ordinary tram-car, and carried twenty passengers. In a second electric railway in Berlin, two overhead conductors, nine inches apart, are used, contact being made by a small carriage running on them and attached by flexible cables to the moving car. This system has also been

adopted on a line seven hundred yards long at the Zankerode Colliery in Germany, and has been working successfully since October 1882. At the Exhibition of Electric Appliances in Chicago the year before last, an electric railway ran around the gallery of the main building, about one-third of a mile in length. In the space of thirteen days, over twenty-six thousand passengers were carried on this railway.

At the International Forestry Exhibition in Edinburgh in 1884, an electric railway was exhibited, and carried many persons. Quite recently, an electric railway four miles in length has been opened connecting the towns of Frankfort and Offenbach. Overhead slit tube conductors suspended from poles are used on this line.

In the north of Ireland, an electric railway between Portrush and Bushmills—a distance of six miles—has been working very satisfactorily for many months past. The two working rails are joined electrically by copper bolts, and form the 'return' circuit, the current being conveyed to the car by a third rail placed on short insulated standards, and rubbed by a brush attached to the car. The motive-power for this railway is obtained from turbines placed at a fall on the river Bush. (A full account of the line will be found in this *Journal* for Nov. 17, 1883.) A second line, about three miles in length, is now in course of construction in Ireland. It is being made for the Bessbrook Spinning Company, near Newry, and is expected to be opened this year.

A very interesting experiment in electric railways has been in progress at Brighton for some time past, which many of our seaside resorts might with advantage imitate. A line was opened in August 1883, and continued working until January 1884, when it was taken up in order to alter the gradient for the new road. The line started opposite the Aquarium and terminated at the Chain Pier—a distance of about a quarter of a mile. The flanged rails upon which the car ran, and which acted also as electric conductors, were spiked to longitudinal sleepers. These wooden sleepers were simply coated with tar, and laid on the shingle parallel with the road, the insulation thus obtained being found to be amply sufficient. The dynamo used to generate the current was driven by a gas-engine. During the six months the line was open, thirty thousand persons were carried by it. The new railway starts at the Aquarium, as before, is continued under the Chain Pier, and terminates at the Free Pier—a distance of nearly a mile. The new car is of very handsome design, and carries eighteen passengers. Since the opening of this line, over two hundred thousand persons have availed themselves of it. Financially, the line has been a great success, and at times the demand for seats has been so great that the accommodation has been quite inadequate, and arrangements have been made for placing additional cars on the line.

In the railways of the future, the chief object to be attained is that a larger number of passengers may travel at a higher rate of speed, with greater safety, and at a less cost than at present. All the above conditions should be simultaneously satisfied by any system which is to supersede our present railways. A system of electric railways would seem to satisfy these conditions more completely than any other. The percentage of passengers injured while travelling in our old stage-coaches was much greater than in railway travelling; and it may reasonably be hoped that this percentage may be still further reduced, even with a considerable increase over the present rate of speed. An electrically driven train requires no heavy cumbrous locomotive, the train being driven by small motors attached to each pair of wheels. Some of the advantages of such a system are at once apparent. The ponderous locomotive, weighing frequently one half as much as the train of carriages behind it, wastes a proportional amount of power in propelling itself. The entire line with its rails and bridges must be made strong enough to carry safely the weight of the locomotive and to withstand the terrific wear and tear caused by such a huge mass moving at a high speed. If there were no locomotives, railways might be made much lighter, with a great saving both in first cost and maintenance. By driving a train from every pair of wheels, instead of from the driving-wheels of the locomotive alone, it becomes possible to go round curves with greater safety and at a much higher speed than at present; the swaying and jolting are reduced to a minimum; full speed can be attained in a few seconds instead of several minutes; and much steeper inclines can be surmounted than is now possible. In rounding a curve, a considerable portion of the power of the locomotive is expended in forcing the flanges of the wheels against the rails and in tending to pull the carriages off the rails. The principle here involved is precisely similar to that in the case of a train provided with a continuous brake and one in which the engine alone is provided with a brake. In the former case, the train can be brought to rest much more speedily than in the latter. With the lines in average condition, an ordinary train would run down an incline of about one in fifty, if the engine alone were braked; but if the train were supplied with a continuous brake, it could rest without slipping on an incline of about one in five. Hence is evident the advantage an electrically driven train would have in rapidly getting up full speed and in surmounting steep inclines. An immense saving in first cost of construction would result from the possibility of working lines of railway with steeper gradients than is at present possible.

The electric system of propulsion would seem to be admirably adapted for suburban tramways, elevated lines, and lines through tunnels like the Metropolitan Railway. The weight and noise of the engine are got rid of, and the air remains free from the unpleasant products of combustion. The carriages can also be lighted and warmed with manifest convenience from the same conductors from which they derive their motion. As regards the competition of electricity with the locomotive for main lines of railway, it is impossible at present to speak with any degree of certainty. Electric railways up to the present time are on a comparatively small scale; but judging from their undoubted success and from theoretical considerations, future success would appear to be assured. For light lines through difficult country, underground, and elevated lines, there can be no doubt but that the locomotive

will be superseded before long by the electric system.

In order to avoid the large amount of leakage which must necessarily take place on a long line, Messrs Ayrton and Perry propose to divide the line into a number of sections, the current being conveyed along the whole length of the line by a well-insulated cable laid alongside the ordinary rails. Each section is put into electrical communication with the cable, automatically by the train as required, and contact broken again as the train leaves the section. Leakage can thus take place only from a section on which a train happens to be, instead of from the whole length of line, the leakage from the cable being practically nil. Such an arrangement may be made to constitute an absolute block system, so that one train cannot possibly run into a preceding one, even if the latter comes to a stop. Imagine three consecutive sections A, B, and C. A train leaving section A, and entering section B, cuts off the current from section A, and receives current from section B. At the same moment the 'going' and 'returning' conductors of section A are automatically connected, and the motors of a train entering on this section are at once 'short-circuited' and brought to rest, so that no following train can proceed along section A until the train in front has entered section C. Section A is for the time a blocked section, and a train entering such a section is at once powerfully braked, and cannot be started again until the train in front is at a safe distance ahead. Hence, there must always be at least one unoccupied section between two trains. The value and safety of such a system are at once evident, and it is a system which is absolutely independent of signalmen, drivers, or guards.

An interesting line is now in course of construction in London—namely, the Charing Cross and Waterloo Electric Railway. This line is to start from the north end of Northumberland Avenue, opposite the *Grand Hotel*, pass under the Thames in iron caissons, and terminate at the present Waterloo terminus of the London and South-western Railway. The line is to be double, and worked by a stationary engine, driving the dynamo-electric machines at the Waterloo end. It is proposed to run the carriages separately, and start them as filled, about three minutes being occupied on the journey. Plans and estimates have been prepared and deposited for two other underground electric railways, but they have been successfully opposed for the present. These are—the Mid London Electric Railway, from Oxford Street to Cornhill; and the London Central Electric Railway, from Northumberland Avenue to the General Post-office, by way of Piccadilly Circus, New Oxford Street, and Holborn.

Another system of electric propulsion especially suitable for tramways in towns involves the use of secondary batteries. A secondary battery is an instrument for storing electricity—electrical energy, not current, being contained in a charged battery. A storage or secondary cell consists of a number of thin lead plates placed close together edgewise in glass or ebonite boxes, but prevented from touching one another by india-rubber plugs. The lead plates are perforated, and the holes filled with oxide of lead in the form of red lead. The alternate plates in a cell are connected together electrically by soldering, one set being called the positive, and the other the negative, plates. The box or cell is filled up with dilute sulphuric acid. A number of such cells with their terminals connected together, usually in series, constitutes a secondary battery. When the current from a dynamo-electric machine is passed through the cells, the red lead on the positive plates is converted into peroxide of lead, and on the negative plates is reduced to spongy metallic lead. This is effected by the liberation of oxygen at the positive plates, and hydrogen at the negative plates by the action of the current. This process having been carried on for some time, volumes of gas arise from the plates, and the charging is complete. The charged battery is now ready for use, and may be made to light electric lamps or drive electric motors by connecting them to its terminals. The battery is gradually discharged of its energy, the plates return to their original condition, and are ready for re-charging.

As usually made, a one horse-power cell contains twelve pairs of plates, weighs fifty-six pounds, and measures outside about 10 in. × 9 in. × 8 in. Fifty such cells would supply over five horse-power for about eight hours, or a greater horse-power for a shorter time. The charged cells are placed under the seats of the tram-car, and the current from them led to a motor placed under the floor and attached to or gearing with the axle of the car. This system is an exceedingly simple one, and the mechanical and electrical difficulties easy of solution. Numerous successful experiments have been carried out on this plan in London, Paris, Brussels, and other places. The only obstacle to its general introduction appears to be the difficulty of obtaining a reliable and economical form of secondary battery. The waste of horses on tramways is both costly and cruel, owing chiefly to the numerous stoppages and the severe strain on the horses at every fresh start. An economical and reliable electric tram-car would be gladly welcomed.

ELECTRIC LAUNCHES.

Electric boats, or launches as they are termed, depend for their existence upon the modern dynamo-electric machine and the still more modern electric storage battery. For driving boats electrically, secondary batteries are a necessity, for it is obviously impossible to apply the current in any other way. The charged batteries are placed under the seats of the launch or where found convenient, and the current led from them by means of short lengths of cable to the electric motor, which is mounted directly on the screw shaft and attached to the bottom of the launch.

One of the earliest experimenters in electric navigation was Professor Jacobi, who in the year 1838 propelled a boat by means of electricity on the river Neva. His boat was twenty-eight feet long, and moved at the rate of two and a quarter miles per hour. The motive-power was supplied by primary batteries, which actuated an electric motor of his own invention. About the year 1850, some experiments with an electric boat were carried out at Falmouth by Mr Hunt;

in 1856 on the Thames by Mr Deering; and in 1866 on the lake in the Bois de Boulogne by the Count de Mollins; but nothing practical came of these efforts, on account of the expense, weight, and trouble of the primary batteries used, and the imperfect construction of the motors, which utilised only a small portion of the power of the batteries. In August 1882, M. Trouvé, an ingenious French electrician, took part in a regatta at Troyes with an electric boat, and easily distanced a four-oared gig. The electricity was generated in a bichromate battery, and led to a motor fixed to the rudder-head. The propeller was mounted on the rudder itself, and driven by an endless chain from the motor. The experiment was a highly successful one, the boat being stopped, started, reversed, and turned with the greatest ease. The foregoing examples are interesting and instructive; but electric boats propelled by means of primary batteries could never come largely into use, on account of the expense of maintaining the batteries. It was not until the introduction of the secondary battery, several years ago, that electric boats on a practical scale became possible.

The *Electricity*, the first electric launch, properly so called, was launched at Millwall in September 1882. She is twenty-five feet long, and carries ten passengers comfortably. On her trial trip she ran from Millwall to Old Swan Pier, London Bridge, in twenty-three minutes; and returned to Millwall in thirty minutes. The astonishment of spectators on the river and banks at seeing the launch with its load of passengers glide swiftly along without any apparent means of propulsion was very great. In July 1883 an experimental trip was made on the Thames in an electric launch forty feet long, made of galvanised steel. The power was supplied by about eighty secondary cells placed under the seats and floor of the launch, the current from which was conveyed to a motor also placed under the floor and driving the propeller direct. The distance of six miles between Temple Pier and Greenwich was covered in thirty-seven minutes with twenty-one persons on board. About six horse-power was required to propel the launch at this speed, and the fully charged cells would contain sufficient energy to allow of the boat running six hours continuously. On the occasion of the recent Electrical Exhibition in Vienna, this launch was exhibited there; and in September 1883, she conveyed a party along the Danube from Vienna to Presburg, a distance of fifty miles, accomplishing the journey in four hours. She was built by Messrs Yarrow & Co. for the Electrical Power Storage Company, and could accommodate forty passengers with ease.

An electric launch possesses many important advantages over a steam launch, and even in its present stage of development might replace the latter with advantage in many cases. In an electric launch the accumulator cells and motor are placed under the seats and floor, are quite invisible, and occupy no space which might otherwise have been available for passengers or goods. In a steam launch, on the other hand, a considerable portion of the centre and most convenient space is taken up by the boiler and engine. It is at once evident that an electric launch will carry more passengers than a steam launch of the same dimensions. In point of expense the two systems would be about equal; but when numerous charging stations are established of suitable size and convenient position, the electric system would appear to have the advantage. The batteries would be charged in position while the boat is moored, cables being carried on board for the purpose. When the cells are once charged, they will remain so for a long time, subject to a small loss through leakage. Hence a boat with charged cells on board is available for use at a moment's notice, while in the case of a steam launch a considerable time is lost in getting up steam. This is a highly important advantage in many cases. One attendant only is required in an electric launch, as all the operations of stopping, starting, and reversing are effected by means of two small levers. In addition, an electric launch is entirely free from dirt, smoke, heat, and smell, which are frequently so unpleasant on board a steam launch. There is almost an entire absence of noise and vibration, and thus an electric launch is the very *beau idéal* of a pleasure-boat.

For business, pleasure, and war purposes, electric launches will doubtless be largely used in the future. They are more suitable for light and rapid traffic than for the transport of heavy goods; their chief advantages being that they are safe, are easily managed, and are always ready for use. They are specially suitable for harbour, river, and lake service; for war purposes, whether as torpedo boats or as tenders to larger vessels, they must prove invaluable. Whether electricity is destined to supersede steam in large vessels and on long voyages, is a highly interesting and important question, but one which cannot at present be answered with any degree of certainty. Considering the present rapid advance of scientific knowledge, it would be highly rash to predict a limited use only for electricity in the propulsion of vessels. No less an authority than Dr Lardner pronounced it impossible for steamships ever to trade across the Atlantic; and another eminent public man offered to swallow the boilers of the first steamboat that should accomplish the journey, yet very shortly afterwards several steam-vessels made the trip. Up to a certain point, the constant weight of the batteries would act as the necessary ballast in vessels; but the question arises whether this weight would not be too great in the case of large ocean-going vessels, which require enormous power for their propulsion.

AMUSING BREVITIES.

NEVER was a time when brevity was more the fashion and more constantly insisted upon than at present. As an American paper says, we insist that all art, all literature, and all emotions shall be brief. It is the age of epigram. Even the universal impatience engendered by the restlessness and hurry of the time, should be satisfied with the terseness, for instance, which describes a bad cook as one who makes a hash of everything—except mutton; an unsatisfactory meal, as a domestic broil; and the average prize-fight of the day—a paper mill. We are reminded that it is harder for a woman to hold her tongue than for

a man to hold a baby; that in a game of cards a good deal depends on good playing; and good playing depends on a good deal; and that getting into a passion is a great deal like getting into a barberry bush. The bush comes out all right, but you don't. The hardness of the world is laconically hit off in the saying, 'Every rose has its thorn, but not one thorn in a hundred has its rose.'

Not a bad answer was made by a sportsman returning from the marshes, when asked if he had shot anything. 'No;' he said; 'but I have given the birds a good serenading.'

'Yes, sir,' said Jenkins; 'Smithers is a man who keeps his word; but then he has to.'—'How is that?' asked Jones.—'Because no one will take it.'—'Mercy me! what are those horrible sounds up-stairs?'—'Oh, that is nothing but dear George. I suppose he has lost his collar-stud again.'

The art of condensation was evidently studied by the journalist who reported: 'A coloured gentleman went into a blacksmith's shop with his coat-tails full of powder. He came out through the roof.' This reminds us of—A quarryman said he couldn't see any danger in smoking while he was handling powder. He can't see anything now. A poor American who complained that he was like the moon—at his last 'quarter'—was as witty as the man who advertised a clock for sale which kept time like a tax-gatherer. A good advertisement appeared on a sign in the Far West: 'Here's where you get a meal like your mother used to give you.' But for graphic illustration of the *multum in parvo*, what could beat the sign of the travelling dentist in the United States, which bore the startling announcement, 2th pullin'?

As pithy as some of the foregoing, but more satirical, is the description of a man said to be so mean that he wishes his landlord to reduce the price of his board because he has had two of his teeth extracted. Severer was the remark of a man, who, hearing that an acquaintance had married again, exclaimed: 'Stupid donkey! He didn't deserve to lose his first wife.' A famous preacher remarked that it is possible for a man to be a Christian and belong to a brass band, but that it would be difficult for such a man's next-door neighbour to be a Christian.

Nothing makes a bald-headed man madder than to be accused of never cleaning the hairs out of the comb, says an American; and an old darkey observed that 'a man would be a heap better off if he was as particular 'bout de whisky he drinks as he is 'bout de water.' Somewhat satirical is the announcement that there is a man in New York who manufactures diamonds for actresses to lose. They are sold at so much a quart.

There is a good deal of quiet humour in the few lines in which a certain country paper commented on political affairs: 'The scarcity of new hats in the street shows that very little interest was taken in the election.' Another humorist observes: 'It takes eight hundred full-blown roses to make a tablespoonful of perfume; whilst a shilling's-worth of cooked onions will scent a neighbourhood.'

A Chicago hotel-keeper recently had a man arrested for stealing a cake of soap. The man pleaded in extenuation of his offence that he wanted it for his collection of curiosities, it being the first cake of soap he had ever discovered in a Chicago hotel. Equally sarcastic was the reply of one of the auditors of a political orator, speaking of a certain general whom he professed to admire, and said he was always found where the bullets were thickest. 'Where was that?' asked one of the crowd. 'In the ammunition wagon!' shouted another.

'I'm from Mr Brown, mum—gentleman what lives across the way. He says: Won't you please shut them windows when the young lady's a-playing?'—'But I thought Mr Brown was musical himself?'—'That's the reason, mum.'

At a party, a young lady began a song, 'The autumn days have come; ten thousand leaves are falling.' She began too high. 'Ten thousand,' she screeched, and stopped. 'Start her at five thousand!' cried an auctioneer present.

A lady in a registry office observed: 'I am afraid that that little girl won't do for a nurse; she is too small. I should hesitate to trust her with the baby.'—Clerk: 'Her size, madam, we look upon as her greatest recommendation.' Lady: 'Indeed! But she is so very small.'—Clerk: 'I know that she is diminutive; but you should remember that when she drops a baby, it doesn't have very far to fall.'

A physician much attached to his profession and his own skill, during his attendance on a man of letters, observing that the patient was very punctual in taking all his medicines and following his rules, exclaimed in all the pride of his heart: 'Ah, my dear sir, you deserve to be ill!'

None of these, however, may be said to match the following. 'My dear,' said a husband in startling tones, after awaking his wife in the night, 'I have swallowed a dose of strychnine!' 'Well, then, for goodness' sake lie still, or it may come up.'

THEN AND NOW.

THE sky was blue,
Our hearts were true,
Bright shone the sun that summer morn;
The birds sang sweet,
And at our feet
Lay waving fields of yellow corn.

With love and faith
As strong as death,
Without a tear we turned away;
'Tis *now* we weep,
At one fell sweep
Our sun is hid, our sky is gray.

For pride is strong
When hearts are young;
And bitter words that once are spoken,
Return again
With maddening pain;
And faith and vows and hearts are broken.

MARY J. MURCHIE.

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